

REMARKS/ARGUMENTS

Claims 2-5, 7, 8, 10, 12-15, 17-23, and 25-30 are pending in the present application. Claims 1, 11, 16, and 24 are cancelled in the above amendment. Claims 2-4, 7, 10, 12, 17-19, 21, 23, 29, and 30 have been amended. Claims 12 and 25 are independent claims.

Applicants respectfully submit that the amendment to independent claim 12 merely corrects a minor typographical error. Also, Applicants submit that the other claim amendments merely change the dependent claims, so that they now depend on independent claims 12 and 25, rather than on canceled claims 1 and 16.

Since no new subject matter has been added to independent claims 12 and 25, Applicants respectfully submit that the above claim amendments should be entered in that they raise no new issues requiring further search and/or consideration.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-5, 7, 8, and 10-28 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,393,188 to Jeong et al. (hereinafter Jeong). Applicants respectfully submit that claims 1, 11, 16, and 24

have been cancelled. Thus, Applicants submit that this rejection has been rendered moot as to these claims.

Independent claims 12 and 25 each recites a dispersion compensation module including a first dispersion compensating fiber (DCF) having a first dispersion-to-dispersion slope ratio, and a second DCF having a second dispersion-to-dispersion slope ratio. Claims 12 and 25 further recite that the first and second dispersion-to-dispersion slope ratios are each greater than a dispersion-to-dispersion slope ratio associated with the transmission path, and that parameters of the first and second DCFs are selected based on a mathematical solution that minimizes the following terms:

$$\begin{aligned} &D_{trans} * L_{trans} + D_{dcf1} * L_{dcf1} + D_{dcf2} * L_{dcf2}; \text{ and} \\ &L_{trans} * S_{trans} + L_{dcf1} * S_{dcf1} + L_{dcf2} * S_{dcf2}. \end{aligned}$$

Applicants respectfully submit that Jeong fails to disclose these features.

As Applicants argued in the Amendment filed November 26, 2003, Jeong is concerned with compensating for the dispersion and dispersion slope of a single type of transmission fiber 20-- standard single mode fiber (SMF). Applicants respectfully submit that SMF has a dispersion-to-dispersion slope ratio within the range of 275-290 nm.

To provide such compensation, Jeong discloses using a compensator 40, which includes two or more DCFs arranged in serial configuration. As discussed in the Amendment of November 26, 2003, Jeong discloses two ways for choosing the DCFs to be used in the compensator 40. See Jeong at column 3: lines 66 through column 4: line 14.

In the first approach, Jeong includes at least one DCF whose dispersion-to-dispersion slope ratio is greater than 300, and at least one DCF whose ratio is less than 240. This approach allows the dispersion-to-dispersion slope ratio of the DCFs to straddle the slope of the SMF fiber (whose range is 275-290).

In Jeong's second approach, at least one DCF with a negative dispersion-to-dispersion slope ratio is chosen, and at least one DCF whose ratio is positive, but less than 240, is chosen.

Jeong discloses that his compensator is used to minimize the mathematical terms shown in column 3: lines 50-55. Jeong discloses in column 3: lines 58-65 that these equations include the dispersions (D) and dispersion slope (S) of each component optical fiber (i.e., DCF) used in the compensator, including the DCF whose dispersion-to-dispersion slope ratio is lower than the SMF transmission path. These terms in Jeong are different than the terms minimized in claims 1 and 12 and, thus, Jeong expressly teaches away from the claimed invention. Specifically, the

minimized terms of claims 12 and 25 do not include any dispersion values (D) or dispersion slopes (S) for a DCF whose dispersion-to-dispersion slope ratio is lower than the slope of the transmission path.

Applicants respectfully submit that claims 12 and 25 are allowable at least for the reasons set forth above. Furthermore, Applicants submit that claims 2-5, 7, 8, 10, 13-15, 17-23, and 26 through 30 are allowable at least by virtue of their dependency on independent claims 12 and 25. Hence, reconsideration and withdrawal of this rejection is respectfully requested.

Conclusion

Entry of this Amendment After Final is respectfully requested in that the above claim amendments do not raise any new issues requiring further search and/or consideration. Applicants respectfully submit that the subject matter in the amended claims have been previously considered by the Examiner. Further, Applicants submit that the above amendments simplify the issues for appeal by reducing the number of independent claims.

In view of the above amendments and remarks, Applicants earnestly seek reconsideration and withdrawal of the outstanding rejections. Thus, it is respectfully requested that the Examiner

issue a Notice of Allowance in connection with the presently pending claims.


Should the Examiner believe that any outstanding matters remain in the present application, the Examiner is encouraged to contact Jason W. Rhodes (Reg. No. 47,305), at the telephone number of the undersigned to conduct a personal interview in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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